

RESTORING AMERICA'S  
Wildlife Legacy  
2007



## About This Report

This report, *Restoring America's Wildlife Legacy 2007*, presents funding recommendations by the Cooperative Alliance for Refuge Enhancement (CARE) for Fiscal Years 2009 through 2013. While Congress provided modest funding increases from 1998 to the National Wildlife Refuge System's centennial in 2003, subsequent budget cuts have put the Refuge System in peril. The time is now to reverse this trend and invest in these special places, which are cherished by a diverse array of individuals, including sportsmen, recreationists, photographers, wildlife observers, students and teachers.

CARE educates Congress and the American public about the National Wildlife Refuge System. Working in partnership since 1995, CARE is a broad coalition of 21 diverse wildlife, sporting, conservation, and scientific organizations that represent a national constituency numbering more than 5 million people. Recognizing the value of a healthy Refuge System to both the wildlife and habitats refuges were established to protect, CARE highlights the needs of national wildlife refuges and works to secure strong investments in these remarkable lands and waters.

To obtain a hardcopy of this report, please visit [www.fundrefuges.org/CARE/CareHome.html](http://www.fundrefuges.org/CARE/CareHome.html) or contact CARE at:

1901 Pennsylvania Avenue NW, Suite 407  
Washington, D.C., 20006  
Phone: 202.333.9075

## Cooperative Alliance for Refuge Enhancement (CARE)

American Birding Association  
American Fisheries Society  
American Sportsfishing Association  
Assateague Coastal Trust  
Association of Fish and Wildlife Agencies  
Congressional Sportsmen's Foundation  
Defenders of Wildlife  
Ducks Unlimited, Inc.  
Izaak Walton League of America  
National Audubon Society  
National Rifle Association  
National Wildlife Federation  
National Wildlife Refuge Association  
Safari Club International  
The Corps Network  
The Wilderness Society  
The Wildlife Society  
Trout Unlimited  
U.S. Sportsmen's Alliance  
Wildlife Forever  
Wildlife Management Institute

## Executive Summary

For over a century, the National Wildlife Refuge System has protected America's unique wildlife and irreplaceable habitats. *Restoring America's Wildlife Legacy 2007*, prepared by the Cooperative Alliance for Refuge Enhancement (CARE), documents how the chronic under-funding of America's national wildlife refuges threatens the special places intended to preserve America's wildlife and wild lands. In fact, CARE's analysis of refuge needs reveals that refuges are operating at *half* the funding levels needed to maintain this extraordinary system.

National wildlife refuges protect and enhance habitat for wildlife and wildlife-dependent recreation, such as hunting, fishing, and birding, but years of inadequate federal funding have left their future in peril. Due to persistent funding shortfalls, the Refuge System has been forced to restructure its workforce and compromise its mission.

***Restoring America's Wildlife Legacy 2007* details the nationwide impact of funding shortfalls, which includes:**

- A 20 percent cut in national staffing levels, resulting in the permanent loss of 565 essential positions;
- A shortfall of more than \$2.5 billion in operations and maintenance projects;
- More than 57 percent of national wildlife refuges (305 of 547 refuges) operating at a fiscal loss by FY 2013, assuming current staffing and funding trends.

**The report also illustrates some of the deteriorating on-the-ground conditions caused by persistent under-funding. The nearly 40 million annual visitors to America's national wildlife refuges now confront with increasing frequency:**

- Shortened or eliminated visitor center hours, and closed roads;
- Dilapidated viewing platforms and hiking trails;
- Eliminated biological and education programs;
- Reduced or cancelled hunting and fishing events;
- Outdated outreach materials, maps, brochures, and websites.

**Further, without additional resources for habitat management and law enforcement, the Refuge System will be unable to effectively:**

- Control or eliminate aggressive, invasive species;
- Enforce safety regulations and protect refuge visitors;
- Manage habitat for the benefit of wildlife and wildlife watchers;
- Implement necessary conservation measures for endangered and threatened species.



SNOW GEESSE | SQUAW CREEK NWR, MO | KENNETH PHALP

National wildlife refuges now face encroachment from development, invasive species, habitat fragmentation, impacts from global warming and a rapidly declining workforce, but in a world with ever-shrinking open spaces, we need to protect and enhance our natural heritage for the benefit of wildlife and millions of present and future Americans. Simply put, the only way to prevent a dramatic decline in habitat quality and visitor services is to increase the Refuge System's annual operations and maintenance budgets.

Based on a comprehensive analysis of refuge funding needs, CARE recommends **\$765 million in annual operations and maintenance funding to adequately address the fiscal crisis facing the National Wildlife Refuge System.** The FY 2006 Refuge System budget was half this amount, revealing why the Refuge System is now struggling to achieve its wildlife conservation mission.

A photograph of three sandhill cranes in a wetland at dawn. The cranes are silhouetted against a warm, golden light from the rising sun. They are standing in shallow water, with their reflections visible. The background shows bare trees and a misty atmosphere.

## America's National Wildlife Refuge System

SANDHILL CRANES IN MORNING FOG | BOSQUE DEL APACHE NWR, NM | DAVID CALDWELL

Our country's National Wildlife Refuge System is one of the world's premier wildlife networks. Since 1903, when President Teddy Roosevelt established Pelican Island in Florida as America's first national wildlife refuge, the National Wildlife Refuge System has grown to host nearly 40 million visitors on more than 546 refuges each year, and includes 100 million acres of some of the most visually stunning and biologically diverse lands and waters in America.

Refuges are undeniably unique. They conserve wildlife and habitat on both small and large parcels of land, such as the half-acre Mille Lacs National Wildlife Refuge (NWR) in Minnesota and the 19 million acre Yukon Flats NWR in Alaska. National wildlife refuges encompass a vast array of ecosystems including wetlands, forest, prairie, desert, and seashores. Refuge lands harbor 21 million acres of designated Wilderness, located in such places as Fort Niobrara NWR in Nebraska, the Edwin B. Forsythe NWR in New Jersey and Massachusetts' Monomoy NWR. But national wildlife refuges are also found in urban areas, including Philadelphia's John Heinz NWR and San Francisco's Don Edwards San Francisco Bay NWR. The system also embraces a network of approximately 3,000 waterfowl production areas, found mostly in the northern Great Plains, which span 3.1 million acres and are vital wetland and grassland components of the Refuge System.

A decade ago, Congress adopted organic legislation for the Refuge System, which clarifies that wildlife comes first in refuge management and that refuges be viewed as a system of interrelated lands. Toward that end, the National Wildlife Refuge System Improvement Act of 1997 (Refuge Improvement Act) emphasizes wildlife conservation and the maintenance of the Refuge System's biological integrity, diversity and environmental health. The Refuge Improvement Act also recognizes the importance of refuges for outdoor recreation and declares that six wildlife-dependent recreational uses including hunting, fishing, environmental education and interpretation, and wildlife observation and photography, receive priority consideration over all other uses of the Refuge System.

The Refuge Improvement Act directs the U.S. Fish and Wildlife Service (FWS), the agency charged with stewardship responsibility for the Refuge System, to prepare a Comprehensive Conservation Plan (CCP) for each national wildlife refuge. Each CCP details refuge management practices for a 15-year period including how wildlife habitat will be managed and which compatible public uses will be facilitated. The Refuge Improvement Act mandates that every refuge in the entire Refuge System must finalize its CCP by 2012.

*Demand for environmental education continues to grow throughout the Refuge System, with nearly 780,000 participants in 2006*

## Protecting Our Wildlife Legacy

The diversity of landscapes and wildlife species within the Refuge System is stunning. National wildlife refuges are the only federal land system established explicitly to safeguard wildlife and their habitat. America's refuges provide habitat for more than 700 bird species, 220 mammals, 250 reptiles and amphibians, more than 1,000 fish and a bewildering variety of invertebrate and plant species.

National wildlife refuges also offer protection for 260 endangered or threatened species. For example, endangered Whooping cranes are recovering from the brink of extinction due to conservation efforts at Aransas NWR in Texas, while San Joaquin River NWR in California protects the endangered Blunt-nosed leopard lizard and San Joaquin kit fox. In South Carolina, threatened and endangered species, and others of conservation concern, including Swainson's warbler, Red-cockaded woodpecker, and the Pine Barrens treefrog, find sanctuary at Carolina Sandhills NWR.

An incredible 80 percent of the birds on the Pacific flyway migrate through the Klamath Basin refuges in Oregon and California, while the internationally recognized wetlands of Horicon NWR in Wisconsin and Cypress Creek NWR in Illinois provide vital habitat for countless waterfowl and other migratory birds. As part of the Atlantic flyway, Blackwater NWR in Maryland hosts astonishing concentrations of Osprey and Bald eagles, and is home to the endangered Delmarva fox squirrel.

Elk, mule deer, and bighorn sheep wander on Charles M. Russell NWR in Montana, while on Sheldon NWR large wintering herds of pronghorn antelope and scattered bands of bighorn sheep roam free. In West Virginia's Canaan Valley NWR, Ruffed grouse, mink and bobcats find a safe home.

Alligators swim in the black waters of Georgia's primeval Okefenokee NWR swamp, and living among the islands of Flattery Rocks NWR off Washington's coast are sea lions, harbor seals and whales.

## Preserving our Outdoor Heritage

Refuges not only play a vital role in protecting lands and waters for migratory birds and other wildlife, but also offer a variety of wildlife-dependent recreational and educational opportunities to a broad and diverse group of users. For instance, in keeping with America's fishing and hunting tradition, over 260 national wildlife refuges are open to anglers, while hunters enjoy access to more than 300 refuges and 3,000 waterfowl production areas. Other outdoor enthusiasts come to refuges to observe wildlife, take photos and learn about wildlife, or simply to enjoy the solitude of these wild places.

Outdoor education programs are an important contribution that refuges make to local communities. In fact, demand for environmental education continues throughout the Refuge System, with nearly 780,000 participants in 2006. By using innovative science-based programs and working in partnership with area schools, refuges offer education programs that benefit teachers and students. Facilities such as the Prairie Wetlands Learning Center in Minnesota's Fergus Falls Wetland Management District and the environmental education center at Savannah NWR in Georgia stimulate students' interest in wildlife and the natural world.

## Providing a Community Resource

There is a national wildlife refuge in every state and within an hour's drive of most major cities, thereby allowing people to experience wildlife and

wildlife-dependent recreation without necessarily having to travel to remote areas of the country. Visitation to refuges is an important economic engine and creates many financial and environmental benefits for local communities.

According to a U.S. Fish and Wildlife Service analysis entitled *Banking on Nature 2004: The Economic Benefits to Local Communities of National Wildlife Refuge Visitation*, national wildlife refuges received nearly twice as many visitors as the Grand Canyon, Yosemite, Yellowstone, Acadia, Grand Teton, and Statue of Liberty national parks combined: 36.7 million vs. 18.6 million in 2004. Refuge visitors generated nearly \$1.4 billion in sales for regional economies, of which 83 percent was spent in local communities by travelers from outside the local area. As this spending flowed through the economy, nearly 24,000 private sector jobs were created and \$454 million in employment income was generated.

Of course, America's national wildlife refuges provide innumerable environmental benefits beyond just those felt by wildlife species. For example, refuges filter groundwater and rainwater before it runs downstream to municipal water supplies and, in many areas, curb flooding by storing excess stormwater or attenuating coastal storm surges. The relatively intact plant community on many of America's refuges filters pollution from the air, while natural filtration and sound water management promotes healthy fisheries within and beyond refuge boundaries.

### Rescuing a System in Trouble

Unfortunately, our Refuge System is now at great risk due to severe budget shortfalls. Operating today with less money than in 2004, the Refuge System has reached a crisis point. Years of budget shortfalls have forced refuge managers nationwide to reduce or eliminate staff, education programs, and conservation activities. Many refuges are losing all staff and scores of maintenance projects are long overdue. Visitor centers are closing, invasive species are, in some cases, literally taking over, and planned habitat restoration and

population monitoring work is being shelved.

Insufficient funding is crippling the ability of the FWS to manage and restore wildlife habitat, safely maintain facilities and provide quality environmental education and outdoor recreation programs. Refuges are working under the tight constraints of a federal appropriation that has declined or remained flat for several years. However, refuge expenses must grow each year to meet ever-escalating fixed costs for staff, fuel, utilities, and facilities. Because the Refuge System can no longer keep pace with inflation, it is now in the process of eliminating staff and services. If recent fiscal trends continue, refuges around the country will soon begin operating "in the red" and will either face the prospect of administering a budget dedicated solely to personnel costs, or laying off additional staff and closing still more refuges (see Figure 1).

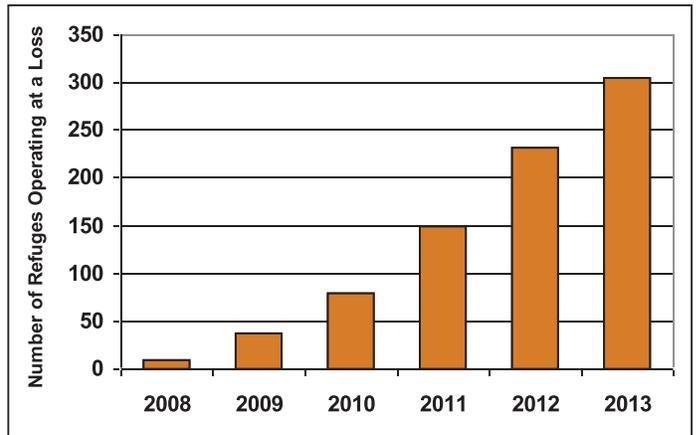


Figure 1. Given current staffing levels and budget trends, the number of national wildlife refuges operating at a fiscal loss will skyrocket to more than 55 percent (305 of 547 refuges) in the next 5 fiscal years.

Among the services in jeopardy are law enforcement, trail maintenance, wildlife management, habitat restoration and upkeep, facilities maintenance, recreational activities, and educational programs. Insufficient staffing will continue to reduce the quality and amount of visitor services and further degrade the ability to manage lands that protect and benefit native wildlife and plant species.

## Impact of Operations and Maintenance Funding Shortfalls on Refuges

### OPERATIONS

- Insufficient numbers of trained employees are available to survey, monitor, and inventory the vast array of fish, wildlife, and plants that inhabit refuge lands. Without baseline biological information, many management programs, including comprehensive conservation plans, cannot be properly designed and implemented.
- Imperiled species may suffer because of missed opportunities to restore habitat and/or recover populations of endangered species. Further, the chance to prevent at-risk species from becoming listed as threatened or endangered is virtually eliminated as biological programs and essential staff are cut.
- Attention to important threats beyond refuge boundaries declines, including water rights issues, poor air quality and other sources of pollution. Oversight of contamination from hazardous substances, adjacent landfill sites, leaking underground storage tanks, and unexploded military ordinance is compromised or abolished.
- Habitat is not properly managed or restored. Restoration is desperately needed on more than four million acres of degraded wetlands, desert, forest, and grasslands. Fewer staff hampers or eliminates refuges' ability to maintain high quality habitats or keep up with invasive plant and animal populations that spread unchecked, displacing native wildlife.
- Visitor services, recreational, interpretive and educational opportunities are diminished. Staffing cuts and reduced office hours decrease the level of necessary communication between refuge personnel and the communities they serve. Curtailed visitor center hours and services force cutbacks in education and interpretive programs.
- Public access to natural areas is restricted due to closures and unsafe infrastructure. As a result, local communities lose access to significant educational, recreational, environmental, and economic benefits.
- Volunteer recruitment, training, and supervision, as mandated by the Refuge Volunteer and Community Partnership Enhancement Act, are diminished or eliminated.
- Law enforcement and patrolling is compromised. Vandalism, trespassing, drug dealing and other illegal activities go unaddressed. Public safety and refuge habitats, especially those along the southern U.S. border, are put at risk.

### MAINTENANCE

- There is diminished capacity to carry out refuge management activities. Deteriorated or inoperable vehicles and equipment impact all aspects of management from inventory and monitoring to compromised public and staff safety. Outdated interpretive displays, dilapidated wildlife viewing platforms and closed trails adversely affect visitor experience.
- Wildlife habitat, natural resource management and project oversight suffers. Delays in corrective maintenance hinder habitat restoration, wildlife protection and public access. For example, dikes in waterfowl impoundments require almost constant attention and repair to maintain the area for wildlife and safe viewing.

*As the Refuge System is forced to continue slashing key staff, the RONS database now identifies 1,225 high-priority staffing vacancies...*

## Funding Challenges

Without increased funding for the Refuge System, the number of staff, habitat quality, education programs, and vital infrastructure will continue their steady decline. Unless Congress increases the annual appropriation for the Refuge System soon, the FWS will be unable to perform its Congressionally mandated duty to “administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations.” (see Figure 2)

## OPERATIONS: \$1.23 BILLION BACKLOG

A FWS database called Refuge Operations Needs System (RONS) tracks operational needs, which includes the staff and equipment necessary to perform routine refuge activities. This database compiles the operational needs of refuge managers and field staff throughout the country and prioritizes these needs into two tiers.

Tier-1 projects are given the highest priority and include projects with essential staffing needs, those critical to fulfilling the mission of both the individual refuge and the entire Refuge System, and projects for new refuges and refuge expansion. Currently, unfunded Tier-1 projects number more than 2,320 and amount to \$251.5 million. Of these, 919 backlogged projects are considered “mission critical” by the Refuge System

and are valued at \$115.3 million.

Other important projects in the RONS database are classified as Tier-2 and total an additional \$976 million. With a total operational backlog approaching \$1.23 billion, persistent funding shortfalls have unfortunately forced scores of missed opportunities.

Most of the operations budget supports the refuge personnel necessary to perform essential habitat management and restoration, wildlife research and monitoring, planning, public use activities, and maintenance. Shortfalls in staff are now the most critical problem facing the Refuge System, which lost 227 staff from 2004-2006; internal

projections target another 338 jobs for elimination by 2010. Even as the Refuge System is forced to continue slashing key staff, the RONS database now identifies

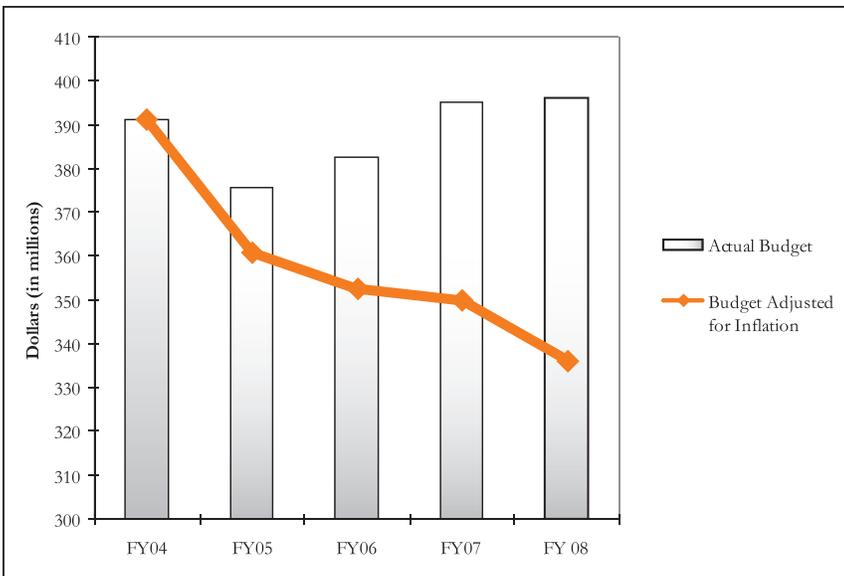


Figure 2 depicts the severe decline in Refuge System purchasing power when accounting for inflation and rising costs. Note: the value for FY08 is based on the President's requested budget.

1,225 high-priority staffing vacancies critical to fulfilling the mission of providing quality wildlife habitat and wildlife-dependent recreation.

**MAINTENANCE: \$1.53 BILLION BACKLOG**

The FWS also maintains a database to track the maintenance needs of the Refuge System. Inadequate funding has led to years of deferred maintenance projects and the Refuge System now reports a total maintenance backlog of \$1.53 billion (see Figure 3). This exorbitant backlog has created a veritable logjam of deferred maintenance projects and has greatly limited refuge personnel in their dual pursuit to protect wildlife and serve the public. Maintenance funding is used to repair or replace dilapidated facilities, to perform

Recognizing the Refuge System's unacceptable fiscal situation, Congress provided modest funding increases from 1998 to the System's centennial in 2003. Those increases were needed to help refuges keep pace with inflation and rising fixed costs, while helping to reduce the increasing rate of unfulfilled high-priority projects. However, in the years since, the Refuge System budget has been essentially flat and does not keep pace with rising inflationary costs of over \$15 million a year. *In other words, simply to keep the modest annual budget on pace with inflation, the Refuge System needs an annual increase of \$15 million per year.* The years of flat funding, combined with rising fixed costs, have forced the FWS to develop and implement regional workforce restructuring plans that eliminate hundreds of staff positions, completely de-staff some refuges, cut educational and recreational programs, and severely curtail services nationwide.

FLORIDA MANATEE | JIM REID

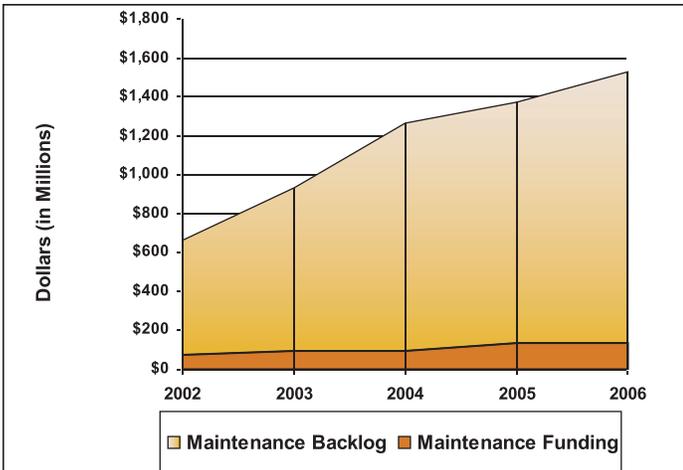


Figure 3. As annual funding for the National Wildlife Refuge System's maintenance account has remained flat in recent years, the size of the overall maintenance backlog has ballooned to more than \$1.5 billion.

preventative maintenance, and to repair or purchase equipment. All funding goes toward vital on-the-ground projects, such as upkeep on equipment for controlled burning, repairs to trails and viewing platforms, or maintenance of water control structures that conserve waterfowl habitat.



ARCTIC NWRI | EVAN HIRSCHKE

# Conclusion

**B**ased on a thorough analysis of the needs, opportunities, and challenges facing the Refuge System, CARE has concluded that sizable increases in annual funding are necessary. Incremental increases over the next five years will enable the Refuge System to fulfill its mandate of protecting wildlife and providing wildlife-dependent recreation by fiscal year 2013. Recognizing that the Refuge System needs an additional \$15 million annually to keep pace with inflation (not accounted for in the justifications below), CARE recommends achieving the following *annual* funding level for the Refuge System by FY 2013:

<i>Operations</i> .....	\$ 443 million
<i>Maintenance</i> .....	\$ 320 million
<b>Total</b> .....	<b>\$ 765 million</b> per year

These increases are warranted and urgently needed for many reasons:

-  To comply with the National Wildlife Refuge System Improvement Act of 1997, refuges are tasked with many additional responsibilities and requirements, including increased biological monitoring, assessments, public use, and comprehensive conservation planning, all of which place additional financial burden on the Refuge System.
-  Unfunded projects identified as ‘Mission Critical’ in the RONS database will cost more than \$115 million. Simply put, the Refuge System cannot adequately fulfill its conservation mandate unless these critical projects are funded.
-  The RONS Tier-1 Essential Staffing report identifies 1,225 additional positions needed

*National wildlife refuges are the strongholds for America's fish and wildlife and provide wildlife-dependent opportunities for millions of people.*

at an annual cost of \$164 million. This figure does not include the nearly 230 staff already lost or the hundreds more slated for elimination.

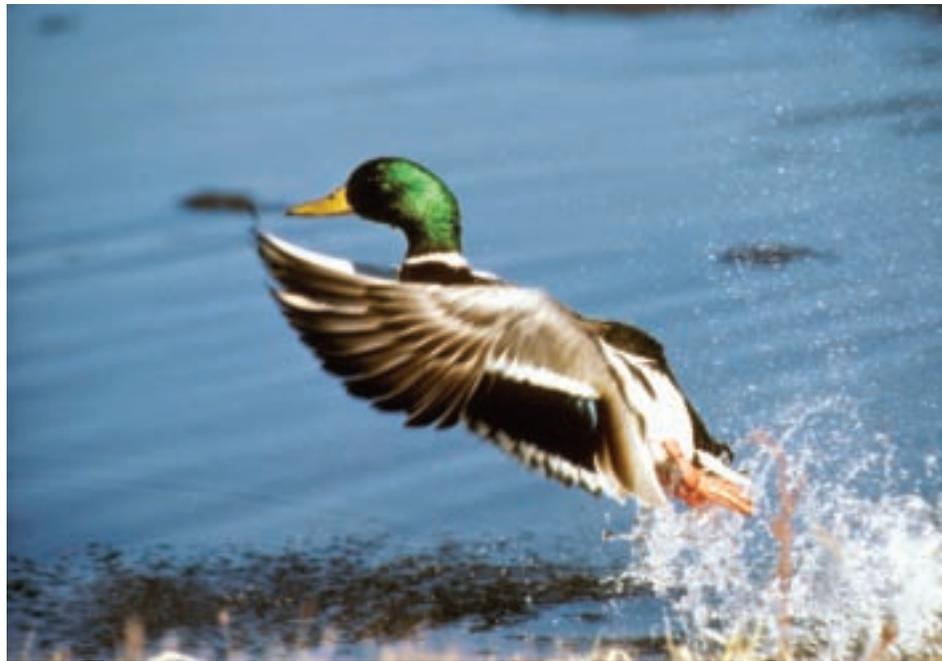
According to workforce restructuring plans proposed by the U.S. Fish and Wildlife Service, the Refuge System will lose 565 jobs, or 20 percent of its nationwide staff, by FY 2009. Just to return to its modest, baseline staffing level of 2004, the Refuge System will need to rehire these positions at a cost of more than \$70 million.

While Congress has created many new refuges in recent decades, most of them were established without additional appropriations. The annual operations and maintenance costs for these new or expanded refuges are estimated to be \$23 million.

Depending on various parameters, industry experts recommend that businesses invest 2-6 percent of a facility's total value in annual maintenance. The Refuge System currently maintains more than \$16 billion in property assets, and invests a woefully inadequate 0.85 percent in annual maintenance. If the Refuge System invested a mere 2 percent annually, it would need \$320 million per year for maintenance alone.

Refuge visitation increased by nearly 10 million people, or 25 percent, in the decade prior to 2006. In recent years, however, the rate of increase has slowed, due in part to

visitor center and refuge closures, deteriorating visitor infrastructure, and the reduction or elimination of public education and interpretive programs. The workforce restructuring plans call for the loss of approximately 160 visitor-services staff, which will severely curtail the benefits derived from working with volunteers and friends groups. The cost of hiring back these lost visitor-related staff would cost the Refuge System nearly \$20 million.



MALLARD DRAKE | ERWIN AND PEGGY BAUER

By 2012, the Refuge System is required by the National Wildlife Refuge System Improvement Act of 1997 to complete Comprehensive Conservation Plans (CCP) for each of its refuges. As of early 2007, approximately 350 were unfinished or yet to be started. To date, each CCP has cost the System an average of \$500,000, which does not even include the employee salaries that

conduct the bulk of the work to research and write each CCP. At this rate, the Refuge System needs \$35.2 million per year to complete the process on time.

- 

The Refuge System has acquired military base closure properties that have come with enormous costs for demolition, management, and public safety. The current maintenance and demolition cost for these projects is \$22.4 million.
- 

Invasive plant and animal species are, in many cases, literally taking over our national wildlife refuges. To adequately implement the public education, species mapping, monitoring, and response components of effective invasives management, the Refuge System estimates it needs a minimum of \$10 million annually.
- 

A 2005 Refuge System and International Association of Chiefs of Police deployment model revealed the urgent need for an

adequately patrol refuge lands, would bring the Refuge System up to 845 full-time law enforcement officers for its more than 96 million acres, a needed increase of 133% in law enforcement staffing. This vitally needed addition of officers would cost the Refuge System \$53.5 million annually.

*(Note: the preceding bullets do not sum to \$765 million due to overlap and redundancy between some of the identified needs. Great care was taken to ensure that no fiscal needs were double counted.)*

Over the last decade, CARE has worked cooperatively with Congress to highlight the needs of the National Wildlife Refuge System and to secure strong investments in this remarkable network of lands and waters. We are grateful for the modest budget increases that Congress provided the Refuge System leading up to its 100th anniversary, and we strongly encourage Congress to again make refuges a priority in its annual appropriations.

Each year, nearly 40 million Americans from coast to coast visit national wildlife refuges to experience the best of our natural resources. Refuges provide diverse recreational opportunities including fishing, hunting, birding, and photographing wildlife, while educating the public and schoolchildren about the wonders of the natural world. In addition, national wildlife refuges stimulate local economic growth, fostering nearly \$1.4 billion in recreation-based economic activity and creating nearly 24,000 private sector jobs.

National wildlife refuges are the strongholds for America's fish and wildlife and provide wildlife-dependent opportunities for millions of people. If we do not soon address the challenges facing our Refuge System, the national network of wildlife conservation lands envisioned by the Refuge Improvement Act will never materialize. CARE remains committed to working with Congress to ensure this important federal land system is protected for wildlife, the American public and our future generations.

additional 482 law enforcement officers on refuges to respond to drug production and trafficking, wildlife poaching, and a host of other crimes. This addition, which the report considers the minimum number to



FLORIDA PANTHER | USFWS





1901 Pennsylvania Ave. N.W. • Suite 407 • Washington, D.C. 20006  
Phone: 202-333-9075 • Fax: 202-333-9077